

This listing of claims will replace all prior versions, and listings, of claims in the application:

The Status of the Claims

1. (Currently Amended) A method of manufacturing an electronic component comprising at least one of an n-doped portion or a p-doped portion, the method comprising the steps of:

~~co-depositing semi-conducting nanoparticles as a solid in liquid suspension and dopant on a substrate, the nanoparticles consisting of only either silicon element or germanium element;~~

depositing a hydrophobic material on a substrate to define a region;

depositing a liquid on the substrate, wherein a hydrophobic/hydrophilic interaction between the deposited hydrophobic material and the deposited liquid conforms the liquid to the defined region, wherein the liquid comprises a dopant and suspended nanoparticles, the nanoparticles comprising at least one of silicon or germanium;

fusing in situ on the substrate the nanoparticles by heating to form a continuous layer through a physical change of melting; and

recrystallizing the continuous layer to form the at least one of the n-doped portion or the p-doped portion.

2. (Cancelled)

3. (Previously Presented) The method of claim 1, wherein the nanoparticles have an average diameter in the range of 3-120 nanometers.

4. (Currently Amended) The method of claim 1, wherein at least one of the fusing and/or the recrystallizing is carried out performed in a reducing atmosphere.

5. (Original) The method of claim 4, wherein the reducing atmosphere comprises approximately 2% hydrogen.

6. (Currently Amended)) The method of claim 4, wherein the reducing atmosphere comprises an inert gas, ~~such as argon~~.

7. (Currently Amended) The method of claim 1, wherein the ~~step of~~ fusing is ~~carried out~~ performed using one or more first laser pulses.

8. (Currently Amended) The method of claim [[1]] 7, wherein the ~~step of~~ recrystallizing is ~~carried out~~ performed using one or more second laser pulses[[.]] subsequent to the first laser pulses.

9. (Currently Amended) The method of claim 1, wherein at least one of the fusing ~~step and/or the recrystallizing step~~ is ~~carried out~~ performed in an oven ~~or the like~~.

10. (Currently Amended) The method of claim 9, wherein ~~in the recrystallizing step,~~ comprises cooling the fused nanoparticles ~~are cooled~~ under ~~predetermined~~ conditions to cause recrystallization.

11. (Currently Amended) The method of claim [[1]] 13, wherein ~~the nanoparticles are deposited in a suspension of a carrier fluid~~ the non-ionic surfactant comprises polyethylene glycol.

12. (Currently Amended) The method of claim [[11]] 1, wherein the ~~carrier fluid~~ liquid comprises a dispersion agent, ~~which stabilizes the nanoparticles in suspension to stabilize the suspension of the nanoparticles in the liquid~~.

13. (Currently Amended) The method of claim 12, wherein the dispersion agent is comprises a non-ionic surfactant such as polyethylene glycol (MW 200).

14. (Currently Amended) The method of claim [[11]] 1, wherein the ~~nanoparticles are deposited in liquid~~ is deposited using at least one of an inkjet printing process, or a digital offset printing process, or ~~either~~ a digital printing process.

15. (Currently Amended) The method of claim [[11]] 1, ~~wherein at least one dimension of the area on the substrate to be occupied by the nanoparticles is selected using a prior step of printing~~ further comprising depositing the hydrophobic material using a printing process.

16. (Currently Amended) The method of claim 15, wherein the printing ~~step is~~ process comprises a soft-contact lithographic printing process.

17. (Cancelled)

18. (Currently Amended) The method of claim [[17]] 1, wherein the hydrophobic material is comprises a paraffin wax dissolved in toluene ~~or a similar hydrophobic material.~~

19. (Currently Amended) The method of claim 1, wherein the recrystallized continuous ~~structure layer~~ forms at least one of the ~~a source, or a drain, or a gate region of a transistor, or a component of a p-n junction, a component of an n-p junction, a component of a p-n-p junction, or a component of an n-p-n junction.~~

20. (Currently Amended) The method of claim 1, wherein the electronic component is comprises at least one of a transistor, or a capacitor, or a diode.

21. - 73. (Cancelled)

74. (Previously Presented) An electronic component, or a component thereof
manufactured using the method of claim 1.

75. (Previously Presented) A heterojunction bipolar transistor according to claim 74.

76. - 88. (Cancelled)